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[54] **OPTICALLY CLEAR REINFORCED SILICONE ELASTOMERS OF HIGH OPTICAL REFRACTIVE INDEX AND IMPROVED MECHANICAL PROPERTIES FOR USE IN INTRAOCULAR LENSES**

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[*] Notice: The term of this patent shall not extend beyond the expiration date of Pat. No. 5,236,970.

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Related U.S. Application Data

[62] Division of Ser. No. 315,279, Sep. 29, 1994, Pat. No. 5,494,946, which is a division of Ser. No. 86,763, Jun. 30, 1993, Pat. No. 5,376,694, which is a division of Ser. No. 870,799, Apr. 17, 1992, Pat. No. 5,236,970, which is a continuation of Ser. No. 562,452, Aug. 1, 1990, abandoned, which is a continuation of Ser. No. 292,212, Dec. 29, 1988, abandoned, which is a continuation of Ser. No. 11,021, Feb. 5, 1987, abandoned.

[51] **Int. Cl.**[6] **C08L 83/05**

[52] **U.S. Cl.** **523/113**; 524/862

[58] **Field of Search** 528/15, 31, 32; 524/862; 523/113

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[57] **ABSTRACT**

Optically clear, reinforced cross-linked silicone elastomers of the invention contain 12 to 18 mol percent of aryl substituted siloxane units of the formula R_4R_5—SiO, end blockers containing silioxane units of the formula $R_1R_2R_3SiO_5$, and dialkyl siloxane units of the formula R_6R_7—SiO. R_1 and $_2$ are alkyl, aryl or substituted alkyl or substituted aryl groups, and R_3 is an alkenyl group. R_4 and R_5 are phenyl or mono lower alkyl substituted phenyl groups. R_6 and R_7 are methyl or ethyl groups. The polymer has a degree of polymerization between 100 to 2000, and preferably approximately 250. The polymer also contains trimethyl silyl treated silica as a reinforcer in the weight ratio of approximately 15 to 45 parts of reinforcer to 100 parts of the polymer. After cross-linking, the polymer has properties of an optical refractive index which is at least 1.44, a type A durometer hardness of at least 35, tensile strength of at least 500 psi and tear strength of at least 20 pli. The foregoing properties render the cross-linked polymer especially suitable for forming the bodies of intraocular lenses.

14 Claims, No Drawings